

# Recovery Plan Action Status

Plan Name: Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon

Plan Status: Final

Plan Date: 15-Dec-05

Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office

(916)

414-6600 )

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Butte County meadowfoam (Limnanthes floccosa ssp. californica)	1	1.4.2.1	Ensure State and local agencies use their authority to protect species occurrences and their vernal pool habitat in Zone 1 core areas.	Ongoing Current	FY 2005		County governments	Acquisition: Easement	Internal Field Assistance	To implement section 10 and other obligations. Butte County is currently developing an HCP/NRCCP to cover Butte County meadowfoam and shrimp.
Hoover's spurge (Chamaesyce hooveri), Colusa grass (Neostapfia colusana), Hairy Orcutt grass (Orcuttia pilosa), Fleshy owl's-clover (Castilleja campestris ssp. succulenta), Slender Orcutt grass (Orcuttia tenuis), Contra Costa goldfields (Lasthenia conjugens), Butte County meadowfoam (Limnanthes floccosa ssp. californica), San Joaquin Orcutt grass (Orcuttia inaequalis), Greene's tuctoria (Tuctoria greenei)	2	2.5.1.3	Conduct Priority 2 seed collection and banking as identified in Table IV-3.	Not Started			Botanical Gardens	Management: Land Use	Internal Field Assistance	Assumes \$15,000 for collection in each region

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Colusa grass (Neostapfia colusana), Contra Costa goldfields (Lasthenia conjugens), Butte County meadowfoam (Limnanthes floccosa ssp. californica), Solano grass (Tuctoria mucronata), Few-flowered navarretia (Navarretia leucocephala ssp. pauciflora (=N. pauciflora)), Greene's tuctoria (Tuctoria greenei)	1	2.5.4.1	Conduct Priority 1 reintroductions and introductions of plants as indicated in Table IV-5 and Table IV-6, respectively.	Ongoing Current			U.S. Fish and Wildlife Service	Management: Propagation	Contract	Assumes \$25,000 x at least 2 sites. Initially successful reintroductions of Neostapfia colusana and Tuctoria greenei have taken place at Grasslands Park and Sacramento NWR Complex respectively.

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Delta green ground beetle ( <i>Elaphrus viridis</i> ), Vernal pool tadpole shrimp ( <i>Lepidurus packardii</i> ), Hoover's spurge ( <i>Chamaesyce hooveri</i> ), Colusa grass ( <i>Neostapfia colusana</i> ), Hairy Orcutt grass ( <i>Orcuttia pilosa</i> ), Longhorn fairy shrimp ( <i>Branchinecta longiantenna</i> ), Fleshy owl's-clover ( <i>Castilleja campestris</i> ssp. <i>succulenta</i> ), Slender Orcutt grass ( <i>Orcuttia tenuis</i> ), Sacramento Orcutt grass ( <i>Orcuttia viscida</i> ), Conservancy fairy shrimp ( <i>Branchinecta conservatio</i> ), Contra Costa goldfields ( <i>Lasthenia conjugens</i> ), Loch Lomond coyote thistle ( <i>Eryngium constancei</i> ), Butte County meadowfoam ( <i>Limnanthes floccosa</i> ssp. <i>californica</i> ), Lake County stonecrop ( <i>Parvisedum leiocarpum</i> ), Solano grass ( <i>Tuctoria mucronata</i> ), Few-flowered navarretia ( <i>Navarretia leucocephala</i> ssp. <i>pauciflora</i> (=N. <i>pauciflora</i> )), San Joaquin Orcutt grass ( <i>Orcuttia inaequalis</i> ), Vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> ), Many-flowered navarretia	1	3.2.2	Conduct standardized status surveys within each vernal pool region, starting with core areas.	Partially Complete	FY 2008	FY 2012	To be decided	Other	Contract, Species Expert	See 1.3.1-1.3.16 above. Species expert has been funded through CVPHRP to conduct plant surveys in Sacramento and San Joaquin Valleys. Final report will be submitted to FWS in 2012.

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(Navarretia leucocephala ssp. plieantha), Greene's tuctoria (Tuctoria greenei)										

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Butte County meadowfoam (Limnanthes floccosa ssp. californica)	2	4.1.2.1	Conduct biosystematics research on Limnanthes floccosa ssp. californica.	Complete	FY 2008	FY 2009	Contractor	Research: Genetics	Contract	Assumes combined cost for researcher, equipment, etc.
Hoover's spurge (Chamaesyce hooveri), Fleshy owl's-clover (Castilleja campestris ssp. succulenta), Contra Costa goldfields (Lasthenia conjugens), Butte County meadowfoam (Limnanthes floccosa ssp. californica), Lake County stonecrop (Parvisedum leiocarpum), Few-flowered navarretia (Navarretia leucocephala ssp. pauciflora (=N. pauciflora)), Many-flowered navarretia (Navarretia leucocephala ssp. plieantha)	2	4.1.3.2.1	Implement research on dispersal mechanisms of annual herbs (Table IV-7)	Not Started			Contractor	Research: Migration	Contract	

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Slender Orcutt grass (Orcuttia tenuis), Butte County meadowfoam (Limnanthes floccosa ssp. californica), Vernal pool fairy shrimp (Branchinecta lynchi)	1	5.2.1	Form individual working groups for each vernal pool region.	Ongoing Current			Vernal Pool Recovery Team	Other	Internal Technical Assistance	Assumes compensation to team members to establish working groups. A working group is being established for the Butte/Tehama Counties. A work plan is being drafted for this group. The second group to be established will be in the Merced/Madera Counties area.
Slender Orcutt grass (Orcuttia tenuis), Butte County meadowfoam (Limnanthes floccosa ssp. californica), Vernal pool fairy shrimp (Branchinecta lynchi)	3	5.2.2	Develop a participation plan and submit to recovery implementation team for review.	Ongoing Current			U.S. Fish and Wildlife Service, Vernal Pool Recovery Team	Other	Internal Technical Assistance	A plan is being drafted simultaneously with assembling the Butte/Tehama work group. Plan will be finalized after group is established.  Assumes shared staff costs to develop participation plan.
Slender Orcutt grass (Orcuttia tenuis), Butte County meadowfoam (Limnanthes floccosa ssp. californica), Vernal pool fairy shrimp (Branchinecta lynchi)	3	5.2.3.1	Identify private landowners interested in pursuing recovery and conservation efforts on their lands and prioritize a list of potential participants.	Ongoing Current			U.S. Fish and Wildlife Service, Vernal Pool Recovery Team	Other, Other: Administration	Internal Technical Assistance	De facto Butte/Tehama working group has discussed how to develop this list and has made tentative suggestions.
Butte County meadowfoam (Limnanthes floccosa ssp. californica)	3	5.2.3.2	Assist private landowners in identifying sources of funding for pursuing conservation easements on their land	Not Started			U.S. Fish and Wildlife Service	Other, Other: Administration	Internal Field Assistance, Internal Technical Assistance	VP Implementation Team is currently working on establishing working groups. Working groups will work with landowners to identify funding sources.

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Butte County meadowfoam (Limnanthes floccosa ssp. californica), Vernal pool fairy shrimp (Branchinecta lynchi)	3	5.2.3.4	Work with cities, counties, and owners of large amounts of natural lands to develop Habitat Conservation Plans	Ongoing Current	FY 2005		U.S. Fish and Wildlife Service, Contractor	Other: Regulations	Internal Technical Assistance	Butte County and City of Chico are developing an HCP/NRCP for their areas.

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